UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: April 14, 1978

SUBJECT: Sodium Hypochlorite Solution EPA Reg.#35317-1 Caswell#776

FROM: William Dykstra, Ph.D
Toxicology Branch WDD 4/14/78

TO: A.E. Castillo
Product Manager #34

Registrant: Kuehne Chemical Company Inc.
P.O. Box 534 (Ft. of Wood Ave. S.)
Linden, N.J. 07036

Action Type: Toxicology Data

Recommendations:

1. The acute oral LD_{50} is regarded as supplementary data, since only male rats were used in this study. The toxicity category is estimated to be TOX Category III: CAUTION

2. The primary skin irritation test is regarded as core-minimum data and the Toxicity Category III: CAUTION

3. The eye irritation test is regarded as core-minimum data. The Toxicity Category is I: DANGER

4. The label signal word is DANGER based on the eye irritation study. The precautionary labeling needs to be changed. Label should state - Corrosive, causes eye and skin damage. Do not get in eyes, on skin, or on clothing. Harmful or fatal if swallowed. Avoid contamination of food.

First Aid: In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Remove and wash contaminated clothing before reuse.

If swallowed, drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

Formulation - Solution Hypochlorite Solution

For industrial use only. For repackaging or reformulating as a disinfectant fungicide, algaecide and for use in municipal water treatment plants and waste treatment plants

EPA FORM 1320-6 (REV. 3-76)

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Chemical	Percent Weight
sodium hypochlorite	12.5
Inert Ingredients	87.5

Use: As a guide, 10 ounces in 10,000 gallons of relatively clear water will yield approximately 1.0 ppm chlorine as measured with a suitable test kit.

Review

1. Acute Oral Toxicity (WARF Institute No. 7091487)

Test Material: yellow liquid 15% mildewcide concentrate (14.7% total available chlorine); 527-7

Method: Two groups of 10 male Sprague-Dawley rats, 7 weeks of age, were dosed by stomach tube with 2.5 and 5.0 gm.kg of test material. Observations were for 14 days.

Results: Oral LD_{50} = between 2.5 and 5.0 gm/kg (males)

Toxic Signs: none observed
Body weight: not reported
Necropsy: Necropsy noted two animals at the level of 5.0 gm/kg had mottled kidneys, congested lungs, ans hyperdistension of the stomach. The rest were autolytic.
Classification: Supplementary Data TOX Category III: CAUTION
(a) only male rats were used

2. Primary Skin Irritation (WARF Institute No. 7091487)

Test Material: yellow liquid, 15% mildewcide concentrate (14.7% total available chlorine); 527-7

Method: Six young adult Albino rabbits, 2.5-3.5 kg BW received dermally 0.5 ml of test material on the abraded and intact skin sites of the fur clipped trunks under an imprevious cuff for 24 hours. Observations were at 24 and 72 hours after exposure.

Results: Primary Skin Irritation Index = 3.75 moderate irritation. Erythema and edema at abraded skin site at 72 hours.

Classification: Core-Minimum Data TOX Category III: CAUTION

3. Eye Irritation (WARF Institute No. 7091487)

Test Material: yellow liquid 15% mildrewcide concentrate (14.7% available chlorine); 527-7

Method: 0.1 ml of test material was instilled into the conjunctival sac of one eyes of six adult New Zealand Rabbits, 2.5-3.5 kg BW. And the untreated eye served as a control. Observation was at 24, 48, 72 hours and 7 and 14 days.

Results: Corneal opacity in 2/6 at day 7 and 2/6 rabbits at day 14.

Classification: Core-Minimum Data TOX Category I: DANGER

Typists: TH

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